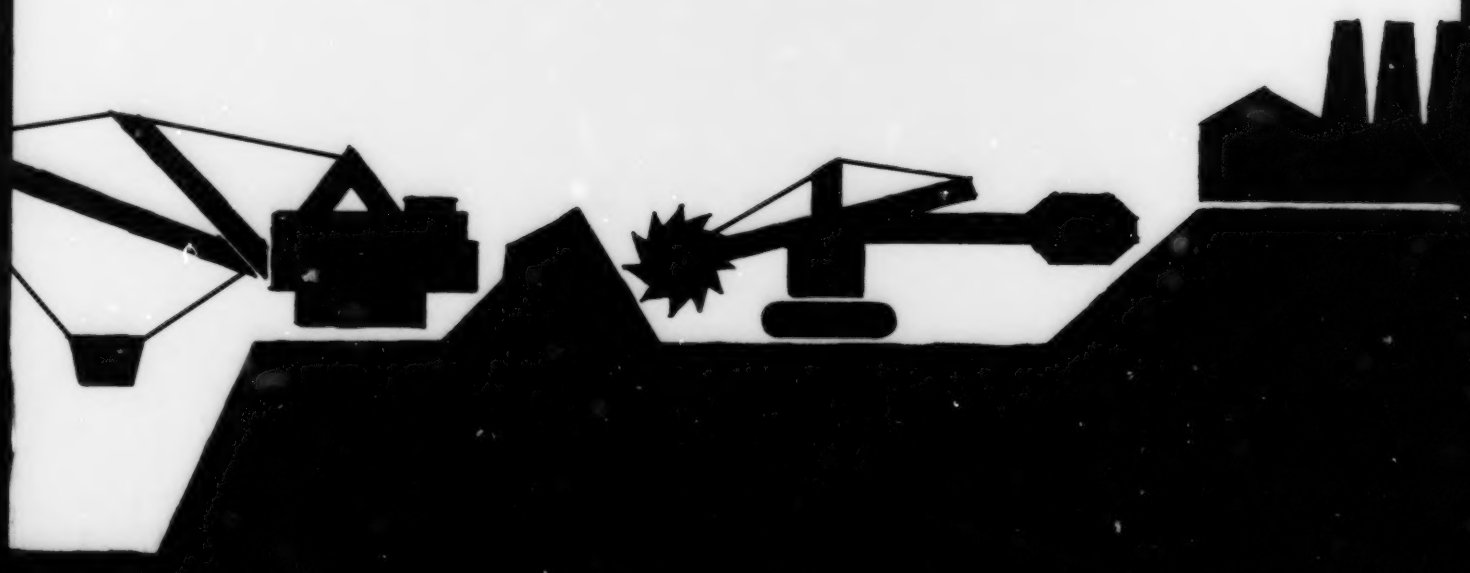
Alberta Oil Sands Equity
Annual Report
1990 - 1991



Alberta

OIL SANDS EQUITY

Alberta Oil Sands Equity Annual Report 1990 – 91

Partnership and Progress in Alberta's Oil Sands Development

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Alberta
ENERGY

Office of the Minister

228 Legislature Building, Edmonton, Alberta, Canada T5K 2B6 403/427-3740

The Honourable Gordon Towers
Lieutenant Governor of Alberta
3rd Floor, Legislature Building
Edmonton, Alberta
T5K 2B6

Your Honour:

I have the honour to present the annual report of Alberta Oil Sands Equity for the year ended March 31, 1991.

Respectfully submitted,

Rick Orman
Minister of Energy

Alberta

ALBERTA OIL SANDS EQUITY

11th Floor, Petroleum Plaza, 9945 – 108 Street, Edmonton, Alberta, Canada T5K 2G6 403/427-2492

The Honourable Rick Orman
Minister of Energy
228 Legislature Building
Edmonton, Alberta
T5K 2B6

Sir:

I am pleased to submit the annual report of Alberta Oil Sands Equity for the year ended March 31, 1991.

Respectfully submitted,

T.R. Vant
Chairman

92-07931/

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Alberta is at the forefront of the oil sands and heavy oil industries. These industries are major employers in the province and have a significant impact on all economies — local, provincial, and national.

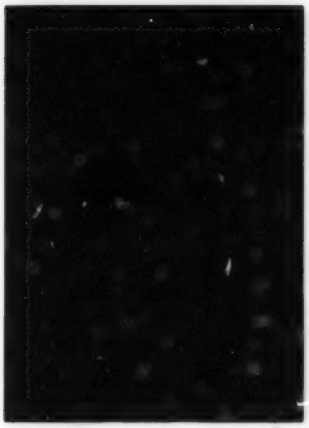
The Government of Alberta has been a key participant in oil sands and heavy oil development for over 70 years through direct research, joint government/industry research and development projects, and equity ownership. For more than 16 years, Alberta, through Alberta Oil Sands Equity, has been an equity participant in the oil sands. Investment by the province has advanced the Syncrude Project, the Lloydminster Bi-Provincial Upgrader project and the OSLO Commercial and OSLO New Ventures Projects in developing to their present stages.

The oil sands and heavy oil industries, once thought of as industries of the future, have come of age as conventional oil reserves continue to decline and more heavy oil and oil sands bitumen are produced, upgraded, and marketed.

Alberta's economic growth is enhanced by oil sands and heavy oil development. The Alberta government is committed to increasing production from oil sands and heavy oil.

This report tells the story of successful industries contributing to Alberta through the creation of jobs, a return of profits to the Alberta Heritage Savings Trust Fund, and advances in technology and technical expertise.

Rick Orman
Minister of Energy



The development of oil sands, heavy oil and the associated technology ensures a reliable energy supply for today and for tomorrow. Alberta Oil Sands Equity is proud to be part of the progress of these industries.

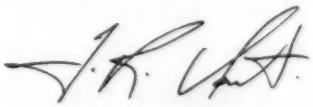
The Syncrude Project produced its 500 millionth barrel of synthetic crude oil in February 1991. Syncrude produced a record 61.9 million barrels of synthetic crude oil that yielded an $82.1 million profit to the Government and people of Alberta in 1990-91.

The OSLO New Ventures Project holds great promise for the future of the industry. New technology means reduced capital and operating costs, better environmental protection, and greater diversity of application for both large and small commercial projects.

The future of the OSLO Commercial Project is less certain. While negotiations on fiscal terms for the construction and operation phases of the Project were continuing at March 31, 1991, no financing plans had been finalized and without assistance from the federal government the Project is not likely to proceed.

The Lloydminster Bi-Provincial Upgrader continues under construction with completion scheduled for late 1992. At March 31, 1991, it was 27% complete and there were over 2,000 people on site.

Alberta Oil Sands Equity continues to be a success story in government-industry partnership. Through the development of oil sands, employment is created, new technologies are developed, and energy supplies for the present and future are secured.

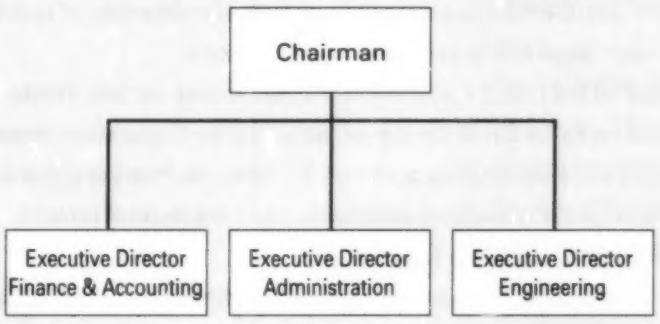


T.R. Vant
Chairman

The Government of Alberta has been an equity owner in the oil sands for over 16 years. Alberta Oil Sands Equity, an unincorporated agency which reports to the Minister of Energy, the Honourable Rick Orman, manages the Government of Alberta's equity investments in oil sands and heavy oil projects. Funding for these investments is provided by the Alberta Heritage Savings Trust Fund.

The Heritage Fund was created in 1976 during a time of rapidly increasing provincial revenues from the sale of non-renewable resources. The Heritage Fund has three basic objectives — to save for the future, to strengthen and diversify Alberta's economy, and to improve the quality of life in Alberta. The Fund received 30% of the Province's resource revenues until 1983-84, when the rate was reduced to 15%; this transfer was suspended in 1987. Heritage Fund income was retained in the Fund until 1982, when the income transfer to support programs and services was commenced. The Heritage Fund has provided over $12.2 billion of income to support the budgetary program, and at March 31, 1991, it held over $12.1 billion of financial assets.

Alberta Oil Sands Equity Organization Chart



Alberta Oil Sands Equity is proud of its role in helping manage Alberta's resource investments on behalf of the Alberta Heritage Savings Trust Fund.

Alberta Oil Sands Equity is headed by the Chairman, Mr. Thomas R. Vant, with three executive directors reporting to him. Alberta Oil Sands Equity's philosophy is to maintain a core group of skilled personnel and to make use of specialized consultants and other professionals as required. Mr. Vant is also Chairman of the Board of Directors of Syncrude Canada Ltd. and is an Alberta Government representative on the Lloydminster Bi-Provincial Upgrader Joint Venture Board, the OSLO Management Committees, and the Northward Developments Ltd. Board of Directors. The Executive Directors and Directors are members of owner sub-committees that support the work of the Board and Management committees. Alberta Oil Sands Equity's expenditures during the 1990-91 fiscal year were $1.4 million.

Alberta Oil Sands Equity: A History of Partnership in Progress

Alberta Oil Sands Equity commenced operations in 1974 when the Government of Alberta became involved in the Syncrude Project. From this beginning, Alberta Oil Sands Equity has expanded its activities to include the management of Alberta's equity participation and investment in the OSLO Commercial Project, the OSLO New Ventures Project, and the Lloydminster Bi-Provincial Upgrader.

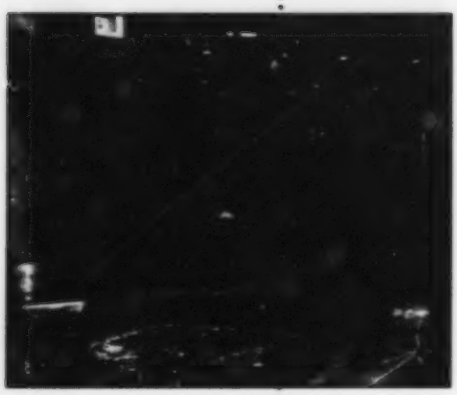
Late in 1974, following completion of the design phase of the Syncrude Project, Atlantic Richfield Canada Ltd. (ARCAN) withdrew from the project due to substantially higher cost estimates and other heavy financial commitments. The Government of Alberta commissioned a major review of the project and reached the following conclusions: that costs had not been overstated, that cancellation of the project would have a major impact on the economy and that there was potential for substantial royalty revenue from the project. When additional private sector participants did not materialize, the Governments of Canada, Alberta, and Ontario met with the three remaining owners, Imperial Oil, Gulf Oil, and Canada-Cities Service; Syncrude's ownership was restructured and construction of the project resumed as scheduled.

In the restructuring, Alberta agreed to take a 10% equity interest in the project and to assume responsibility for the Utilities Plant and the Synthetic Crude Pipeline. Alberta provided loans of $100 million each to Gulf and Canada-Cities. These loans contained an option that allowed them to be converted into equity in the project. Alberta also retained an option to increase its equity share by between 5 and 20% of the project. Since that agreement, the Syncrude Project ownership distribution has changed over the years as shown in Table 1.

Table 1

Syncrude Ownership History (Percentage Amounts)

	1973	1975	1978	1979	1981	1982	1983	1988	1991
Atlantic Richfield	30.00								
Canada-Cities Service	30.00	22.00	22.00	17.60	17.60	13.23			
Esso Resources	30.00	31.25	31.25	25.00	25.00	25.00	25.00	25.00	25.00
Gulf Canada	10.00	16.75	16.75	13.40	13.40	9.03	9.03	9.03	9.03
Petro-Canada		15.00	15.00	12.00	17.00	17.00	17.00	17.00	12.00
Alberta Oil Sands Equity		**10.00**	**10.00**	**8.00**	**8.00**	**16.74**	**16.74**	**16.74**	**16.74**
Ontario Energy Corp.		5.00							
PanCanadian Petroleum			5.00	4.00	4.00	4.00	4.00	10.00	10.00
Alberta Energy Company				10.00	10.00	10.00	10.00	10.00	10.00
Petro-Fina				5.00					
Hudson's Bay Oil & Gas				5.00	5.00				
Dome Petroleum						5.00	5.00		
Canadian Occidental							13.23	7.23	7.23
Amoco								5.00	5.00
Mitsubishi									5.00

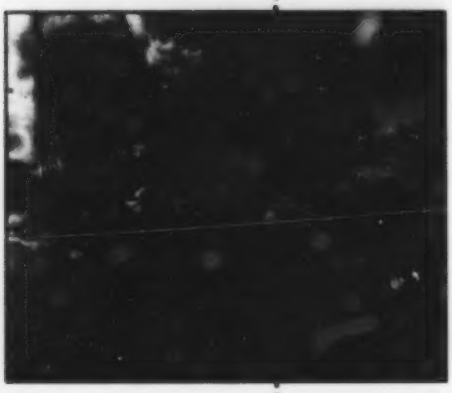


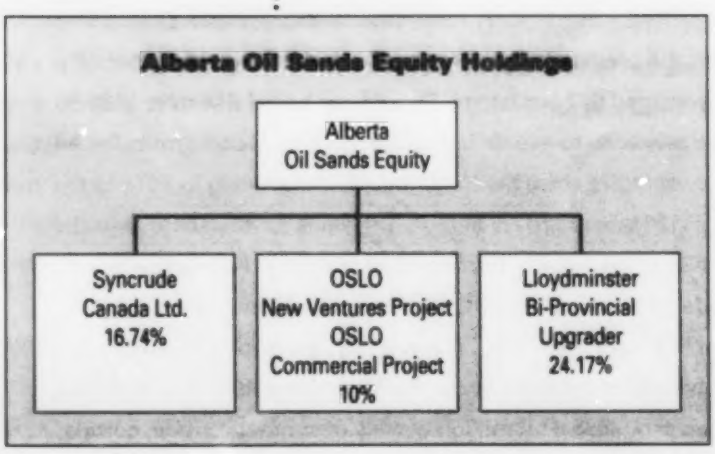
- 1973 • Letter of Agreement was signed with the Syncrude owners which gave the Government of Alberta an option to acquire up to 20% of Syncrude. (Ultimately exercised by Alberta Energy Company).
- 1975 • Atlantic Richfield withdrew from consortium and was replaced by the Federal, Alberta and Ontario Governments.
  • Canada Cities-Service gave up 8%, Esso acquired 1.25% and Gulf acquired 6.75%.
- 1978 • Ontario Energy Corp. sold its 5% interest share to PanCanadian.
- 1979 • In August, Alberta Energy Company exercised its option to acquire a 20% equity share in Syncrude at a cost of $570 million (each of the existing Syncrude owners' interests were reduced by 20%).
  • In Sept., Alberta Energy Company sold half of its equity share to Hudson's Bay Oil & Gas and Petro-Fina.
- 1981 • Petro-Canada bought Petro-Fina's interest, increasing its share to 17%.
- 1982 • Alberta acquired 4.37% interest from each of Gulf and Canada Cities-Service through the exercise of convertible debentures.
  • Dome bought Hudson's Bay Oil & Gas and created a limited partnership to hold the 5% interest.
- 1983 • Canadian Occidental bought Canada Cities-Service.
- 1988 • PanCanadian bought a 6% interest from Canadian Occidental.
  • In August 1988, Amoco completed its takeover of Dome Petroleum and acquired its 5% interest.
- 1991 • Mitsubishi and Petro-Canada exchanged letters of intent for the sale of a 5% interest. This sale is currently scheduled to close on March 31, 1992.

7 Alberta Oil Sands Equity: Partners in Financing and Ownership

Alberta Oil Sands Equity is a 16.74% participant in the Syncrude Project, a 10% participant in the OSLO Commercial Project and the OSLO New Ventures Project, and a 24.17% participant in the Lloydminster Bi-Provincial Upgrader.

Operating funds for Alberta Oil Sands Equity are provided from the General Revenue Fund through the normal government budgetary process. At the end of the fiscal year, administrative costs associated with the management of the Syncrude Project, the OSLO Commercial Project, and the Lloydminster Bi-Provincial Upgrader are billed to the Alberta Heritage Savings Trust Fund. Funds to meet Alberta's commitments to the Syncrude Project, the OSLO Commercial Project, and the Lloydminster Bi-Provincial Upgrader are provided directly from the Alberta Heritage Savings Trust Fund. Similarly, money received from the sale of synthetic crude oil and sulphur is returned directly to the Heritage Savings Trust Fund. The OSLO New Ventures Project is funded from general revenues through the budgetary process.

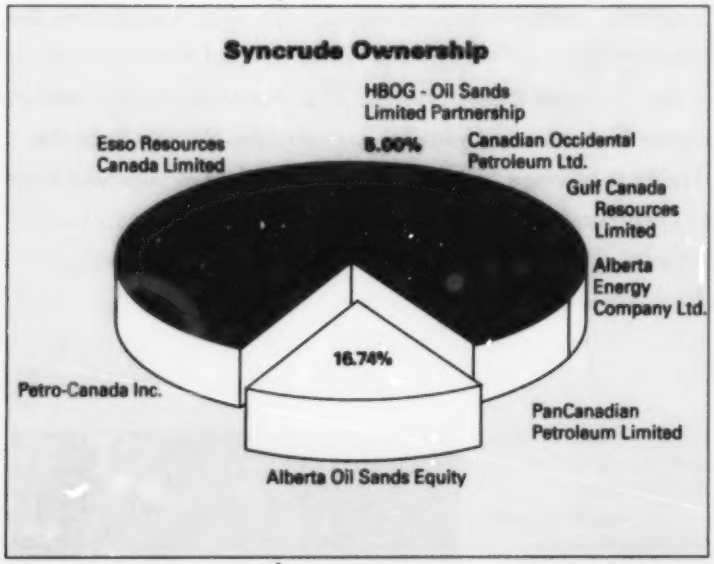




Syncrude Project

The Syncrude Project, located 40 kilometres north of Fort McMurray, is the world's largest oil sands operation, producing more than 10% of Canada's total crude oil requirements.

The Project has a significant impact on Alberta and on Canada. The original total investment in the Syncrude plant was $2.3 billion and since 1978 a further $2 billion in capital has been invested. Syncrude provides direct employment for 4,400 employees and another 1,300 contract staff. The Project generates 16,000 direct and indirect jobs annually in Canada and $1 billion annually in spending to the Canadian economy. Syncrude is one of the largest private sector employers in Alberta and is also the largest private sector employer of native people in the country.



The Alberta Government has decided that the Syncrude Project has matured to the extent that the government is no longer needed as an active participant to ensure the Project's continued success. Although there were no active efforts to market the 16.74% interest in the Project through 1990-91, it is the Government's intention to divest itself of all or a part of the interest when economic circumstances are favourable.

Alberta's 16.74% equity investment in Syncrude yielded an $82.1 million profit for the 1990-91 fiscal year, compared to a $22.5 million profit for the previous year. The profit was the result of higher oil prices, which averaged $27 per barrel. This $4 per barrel rise over 1989-90 levels was due primarily to events in the Persian Gulf. Total profits for Alberta's equity investment since the Project started operating in 1978 to the end of March 1991 were $517.7 million. Royalties for the same period were $1.06 billion. The Alberta Heritage Savings Trust Fund investment in the Syncrude Project at March 31, 1991, was $513.6 million.

In February 1991 Syncrude reached a production milestone of 500 million barrels of synthetic crude oil. During the 1990-91 fiscal year, Syncrude produced 61.9 million barrels of synthetic crude, compared to

51.3 million barrels in 1989-90. Record production was achieved in spite of problems with the Hydrocracker and the Hydrogen Plant.

Production for the calendar year 1991 was 60.3 million barrels, an increase of 3 million barrels over 1990. Production for the 1992 calendar year is expected to rise to 65 million barrels. Increased production will lower Syncrude's direct per barrel operating costs, which were $16.48 per barrel in 1991, and are forecast to be $15.69 per barrel in 1992.

Syncrude is an Alberta success story. The Project's production is rising, unit costs are being reduced and benefits are accruing to local, provincial, and national economies.

Syncrude continues to pay close attention to the environment. Since its beginning Syncrude has had an environmental program in place, starting with research efforts in 1969. The company monitored its site construction impact and continues to monitor all aspects of its operations. The intent of Syncrude's environmental program is that Syncrude "will not cause any known permanent adverse impact on the health of people or the environment."

Since plant start-up in 1978, Syncrude's owners have spent more than $100 million on environmental control technology and reclamation activities. Over the past five years Syncrude has reduced its SO_2 emissions per barrel of synthetic crude oil by approximately 30%. Syncrude is committed to further minimize emissions through effective plant operations and monitoring of new emission reduction technologies. The company's land reclamation policy objective is to create a final landscape at least equal in productive capability to the pre-disturbed state: one that offers a permanent, self-supporting natural community of plants and animals.

Syncrude works closely with local communities and businesses as well as government in setting and independently monitoring environmental objectives for the operation.

Syncrude Operations 1986 – 1991

	1986	1987	1988	1989	1990	1991
Production (MBBLS)	47.4	50.0	54.9	54.0	57.1	60.3
Operating Costs ($M)	709.8	738.8	813.5	927.4	994.0	993.1
Cost per Barrel	14.98	14.77	14.82	17.17	17.41	16.48
Capital Costs ($M)	270.3	243.4	207.3	84.3	139.1	157.5

Profits earned by Alberta's Investment in the Syncrude Project

Profits for the Year Ended March 31 — $M

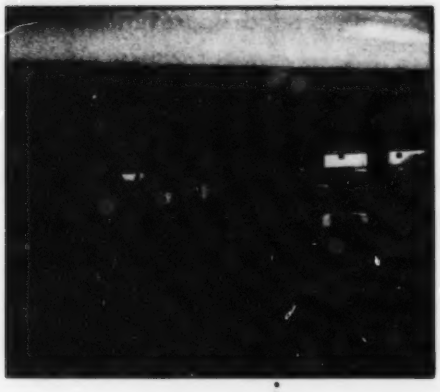
Year	Annual Profit	Cumulative Profit
1980	(4.4)	(4.4)
1981	27.3	22.9
1982	26.9	49.8
1983	68.7	118.5
1984	61.5	180.0
1985	86.5	266.5
1986	72.0	338.5
1987	33.6	372.1
1988	44.1	416.2
1989	(3.1)	413.1
1990	22.5	435.6
1991	82.1	517.7

Book Value of Alberta's Investment in the Syncrude Project

Book Value at March 31 — $M

Year	$M
1981	184
1982	439
1983	411
1984	443
1985	439
1986	459
1987	483
1988	509
1989	512
1990	519
1991	514

11 OSLO New Ventures Project



In 1981, the six OSLO owners signed the Other Six Leases Operating Agreement which initiated an exploration and development program on the six leases. The program had three phases: resource evaluation, commercial definition, and new technology. From 1981 to 1988, more than $30 million was invested in resource evaluation programs and a wide variety of scoping studies. A result of the program was the discovery of a promising deposit located on the north end of Lease 31, about 60 kilometres north of Fort McMurray. This ore body contains more than 3 billion barrels of high quality surface mineable bitumen.

In 1989, the OSLO Project was split into two separate programs: the Commercial Project on the northern portion of Lease 31, and the OSLO New Ventures Project, which handles the exploration and development of the remaining five oil sands leases plus the southern portion of Lease 31.

The New Ventures' mandate is directed toward development of these leases through new technologies that have the potential to significantly reduce bitumen recovery operating costs. The New Ventures Project has been focusing on a dredging process, a borehole mining process, and both cold and hot water extraction processes. Alberta Oil Sands Technology and Research Authority (AOSTRA), which has been funding these programs, has indicated that budgetary limitations may preclude further funding of some of the OSLO programs. This, in turn, could have an impact on the rate of development of these technologies.

At March 31, 1991, the Owners were considering a commercial demonstration project utilizing dredging and cold water extraction processes. The OSLO New Ventures group invented the OSLO Cold Water Extraction Process (OCWE) in 1986. During 1989 and 1990, the process was field-tested using a large scale pilot operating in a continuous mode. Work to date has indicated that the process has the following advantages: it is superior to the Clark Hot Water Process used at Syncrude and Suncor; it reduces capital and operating costs by some 30%; it promotes environmentally superior tailings management as it produces sludge that is more amenable to solidification; it gives high recovery on high clay content ore; it has potential application to Syncrude and OSLO Commercial Projects; and it may be easily utilized in small commercial projects.

OSLO Commercial Project

The OSLO Commercial Project is a potential commercial oil sands plant with a mine site and extraction plant proposed for Lease 31, 60 kilometres north of Fort McMurray and an upgrading facility proposed for a location north of Edmonton near Redwater. The two components of the Project would be linked by parallel pipelines — one line to carry a mixture of bitumen and diluent (a thinning agent) to the upgrader and the other to return the diluent to Lease 31.

Alberta's two existing oil sands mining plants, Syncrude and Suncor, currently produce approximately 15% of Canada's daily oil demand. With the development of OSLO, Alberta would have the daily capacity to meet more than 20% of Canada's demand requirements. At full production of 30 million barrels of oil a year, OSLO would produce enough synthetic crude oil to significantly offset the current rate of decline in the conventional Canadian oil industry.

The Alberta Heritage Savings Trust Fund investment in the OSLO Commercial Project, which commenced in the 1989-90 fiscal year, stood at $5.8 million at March 31, 1991.

Plans at March 31, 1991, called for OSLO to have a production capacity of 80,000 barrels per day of synthetic crude oil with plant start-up set for 1996-97. Initial capital costs were estimated at approximately $5.4 billion.

A Statement of Principles covering fiscal arrangements for the OSLO Commercial Project was signed by the owners and the Governments of Alberta and Canada in September 1988. Work on detailed arrangements continued until February 1990 when the Government of Canada withdrew its funding commitment for construction of the project. Agreements were concluded between the OSLO owners and the Governments of Canada and Alberta to provide financial assistance during the engineering study phase of the Project. Alberta agreed to provide up to $46.8 million or 36% of

the estimated $130 million total cost of the engineering phase. Canada agreed to contribute $45.5 million or 35% of the total. The OSLO owners are to provide the remainder. The engineering studies are scheduled to be completed by December 31, 1991.

Projections for OSLO indicate that, during its construction phase, the Project would generate a peak of close to 6,000 direct jobs or an estimated 18,000 work years of employment. In addition, the Project would spend approximately $320 million annually in continued capital and operating costs. Some 1,600 direct and contract operating positions would be created by the operation of the OSLO mine and extraction plant and upgrading facility.

The OSLO Commercial Project involves the use of conventional open pit truck and shovel surface mining techniques to strip the overburden and mine the oil sands. Bitumen would be separated from the sands by an improved hot water extraction process. The bitumen would then be diluted and transported via pipeline to the upgrader at Redwater.

State-of-the-art hydrogen addition technology would be used at the Redwater site where the upgrader would convert the bitumen into high quality synthetic crude oil suitable as feedstock for conventional refineries. The Redwater plant would represent an advance for the industry as it would provide more flexibility to both the bitumen producing and consuming segments of the operation and it would spread the economic benefits of the project across the province.

The combined operating costs of the two OSLO plant locations are estimated to be about 30% lower than those of existing oil sands plants.

OSLO is committed to minimizing its impact on the environment and the Project would meet or exceed all environmental regulations and guidelines. Environmental considerations were fundamental elements in the design process. An extensive environmental baseline program was employed by the Project to gather all data required for the environmental impact assessment and for the

program to minimize impacts on the environment.

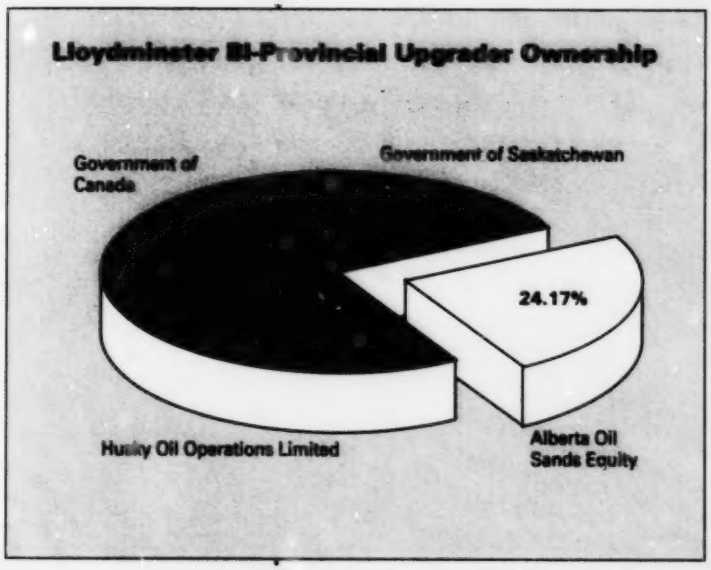
A communications program involving local governments, local residents, and others was in place and the public had an opportunity to provide input to the Project through open houses and information sessions. A Fort McMurray Information Office and a full-time community liaison worker were available to answer questions and provide information about the Project.

The future of the Project has been uncertain since the withdrawal of the federal government from participation in construction funding. While discussions were continuing at March 31, 1991, no financing plans had been finalized. Without assistance from the federal government, the Project as presently planned is unlikely to proceed beyond the engineering phase.

15 Lloydminster Bi-Provincial Upgrader

The Government of Alberta is a participant in a joint venture with Husky Oil and the Governments of Canada and Saskatchewan in the construction, ownership, and operation of a heavy oil upgrader at Lloydminster. The upgrader, currently under construction, is expected to be completed in late 1992.

The Alberta Heritage Savings Trust Fund investment in the Project to March 31, 1991, was $138.9 million.



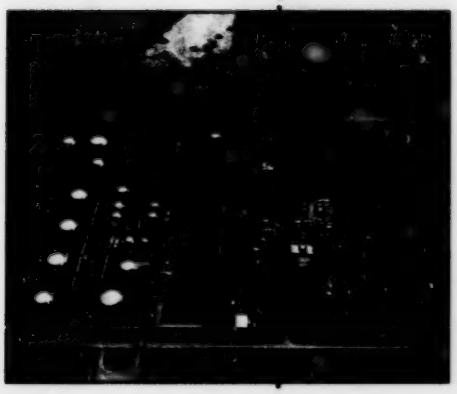
The Lloydminster Bi-Provincial Upgrader will increase the value of heavy crude oil and thereby increase its demand. Heavy crude oil contains a high proportion of heavy hydrocarbons as well as large amounts of contaminants, such as sulphur and heavy metallic compounds. If used as feedstock in a conventional refinery, these crude oils result in excessive production of low-value, high-sulphur content industrial fuels, or asphalts. In order to produce gasoline and the other high-value, light products, refiners would have to invest in expensive conversion equipment.

The upgrader will take 46,000 barrels per day of heavy crude oils from the Lloydminster and Cold Lake regions and convert them into a high-value, synthetic crude oil that can be used by conventional refiners to make gasoline and other light products. The diluent required to get the heavy crude oil to the upgrader will be recovered and recycled to the field for reuse.

Upgrading will be accomplished in several stages. The first step is fractionation in which the heavy crude oil blend is separated into the diluent and other distillate products. The next step involves the conversion of the residual stream into lighter hydrocarbon products in an ebullated bed hydrocracker. The remaining heavy, unconverted residue produced is thermally cracked in a conventional delayed coking unit to produce additional light products as well as about 400 tons per day of low-sulphur coke by-product suitable for use as an industrial

fuel. The light products will be treated in two hydrotreater processes in order to stabilize the products and remove the remaining sulphur and nitrogen contaminants.

The Project is managed by a Joint Venture Board that consists of three representatives of each owner. The Alberta Government representatives on the Joint Venture Board are Thomas R. Vant, Lloyd W. McLaren, and Ed Jenson. Husky, the Project's construction manager, will also operate the upgrader upon its completion.



Construction of the upgrader is expected to create 5,800 direct person-years of employment, and the operations phase will create 300 permanent jobs at the upgrader and a further 1,500 jobs at the crude oil recovery sites. As of March 31, 1991, there were over 2,000 construction workers employed at the site.